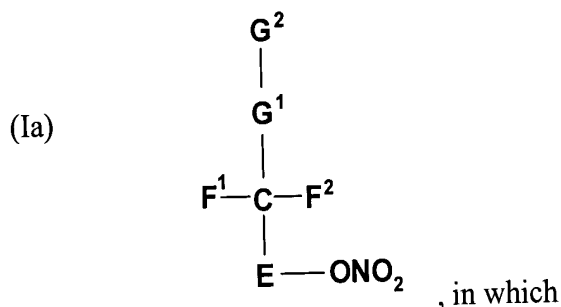


AMENDMENTS

Kindly amend the claims as follows:

Claims 1 – 10 (Cancelled)

11. (Currently amended) A method for providing sedation, mitigating anxiety or providing anaesthesia in a subject in need thereof, comprising administering to [[a]] said subject an effective amount of a therapeutic compound, wherein ~~the~~ said therapeutic compound is of the formula (Ia):



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F^2 is a nitrate group or an organic radical which may be joined in a cyclic ring system with G^2 , and which may contain inorganic counterions, ~~but is not a nitrate group~~;

E is a methylene group;

G^1 is a methylene group or does not exist;

F^1 is H; and

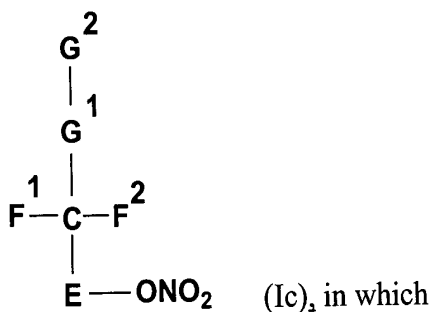
G^2 is $R^N - Z^N$; wherein R^N is an organic radical possessing a heteroaryl group containing a P or S [[atoms]] atom, where said P or S [[are]] is positioned β , γ , or δ to a nitrate group ~~as identified in formula Ia~~; and Z^N is $W_{mm}^N - X_{nn}^N - Y_{oo}^N$; wherein

mm, nn, oo are 0 or 1 and W^N , X^N , Y^N are NH, NR^{NN} , CO, O_2 or CH_2 ; wherein

R^{NN} is a $C_1 - C_{12}$ alkyl group.

12. (Cancelled)

13. (Currently amended) A method for providing sedation, mitigating anxiety or providing anaesthesia in a subject in need thereof, comprising administering to [[a]] said subject an effective amount of a therapeutic compound, wherein the said therapeutic compound is of the formula (Ic):



E is $(\text{R}^1\text{R}^2\text{C})_m$ and $\text{G}^2-\text{G}^1-\text{CF}^1\text{F}^2-$ is $\text{R}^{19}-(\text{R}^3\text{R}^4\text{C})_p-(\text{R}^{17}\text{R}^{18}\text{C})_n-$; wherein [[s]]

each of m, n, and p are is an integer [[s]] from 0 to 10;

$\text{R}^{3,17}$ are each independently hydrogen, a nitrate group, or A; and

$\text{R}^{1,4}$ are each independently hydrogen, or A;

where A is selected from a substituted or unsubstituted aliphatic group comprising a branched or straight-chain aliphatic moiety having from 1 to 24 carbon atoms in the chain, which optionally may contain O, S, NR^6 , ~~and unsaturations~~ or an unsaturation in the chain, optionally bearing from 1 to 4 hydroxy, nitrate, amino, aryl, or heterocyclic groups; an unsubstituted or substituted cyclic aliphatic moiety having from 3 to 7 carbon atoms in the aliphatic ring, which optionally may contain O, S, NR^6 , ~~and unsaturations~~ or an unsaturation in the ring, optionally bearing from 1 to 4 hydroxy, nitrate, amino, aryl, or heterocyclic groups; an unsubstituted or substituted aliphatic moiety constituting a linkage of from 0 to 5 carbons, between R^1 and R^3 and/or between R^{17} and R^4 , which optionally may contain O, S, NR^6 , ~~and unsaturations~~ or an unsaturation in the linkage, and optionally bearing from 1 to 4 hydroxy, nitrate, amino, aryl, or heterocyclic groups; a substituted or

unsubstituted aliphatic group comprising a branched, cyclic or straight-chain aliphatic moiety having from 1 to 24 carbon atoms in the chain, containing ~~carbonyl~~ linkages selected from the group consisting of C=O, C=S, and C=NOH, which optionally may contain O, S, NR⁶, ~~and unsaturations~~ or an unsaturation in the chain, optionally bearing from 1 to 4 hydroxy, nitrate, amino, aryl, or heterocyclic groups; a substituted or unsubstituted aryl group; a substituted or unsubstituted heterocyclic group; an amino group selected from alkylamino, dialkylamino, cyclic amino, diamino, ~~and triamino moieties~~, arylamino, diarylamino, and alkylarylamino moieties; hydroxy; alkoxy; and a substituted or unsubstituted aryloxy; wherein

X is F, Br, Cl, NO₂, CH₂, CF₂, O, NH, NMe, CN, NHOH, N₂H₃, N₂H₂R¹³, N₂HR¹³R¹⁴, N₃, S, SCN, SCN₂H₂(R¹⁵)₂, SCN₂H₃(R¹⁵), SC(O)N(R¹⁵)₂, SC(O)NHR¹⁵, SO₃M, SH, SR⁷, SO₂M, S(O)R⁸, S(O)₂R⁹, S(O)OR⁸, S(O)₂OR⁹, PO₂HM, PO₃HM, PO₃M₂, P(O)(OR¹⁵)(OR¹⁶), P(O)(OR¹⁶)(OM), P(O)(R¹⁵)(OR⁸), P(O)(OM)R¹⁵, CO₂M, CO₂H, CO₂R¹¹, C(O), C(O)R¹², C(O)(OR¹³), PO₂H, PO₂M, P(O)(OR¹⁴), P(O)(R¹³), SO, SO₂, C(O)(SR¹³), SR⁵, SSR⁷ or SSR⁵;

Y is F, Br, Cl, CH₃, CF₂H, CF₃, OH, NH₂, NHR⁶, NR⁶R⁷, CN, NHOH, N₂H₃, N₂H₂R¹³, N₂HR¹³R¹⁴, N₃, S, SCN, SCN₂H₂(R¹⁵)₂, SCN₂H₃(R¹⁵), SC(O)N(R¹⁵)₂, SC(O)NHR¹⁵, SO₃M, SH, SR⁷, SO₂M, S(O)R⁸, S(O)₂R⁹, S(O)OR⁸, S(O)₂OR⁹, PO₂HM, PO₃M₂, P(O)(OR¹⁵)(OR¹⁶), P(O)(OR¹⁶)(OM), P(O)(R¹⁵)(OR⁸), P(O)(OM)R¹⁵, CO₂M, CO₂H, CO₂R¹¹, C(O)R¹², C(O)(OR¹³), C(O)(SR¹³), SR⁵, SSR⁷ or SSR⁵, or does not exist;

each of R², R⁵, R¹⁸, and R¹⁹ ~~are optionally is, independently,~~ hydrogen, A₁ or X-Y;

each of R⁶, R⁷, R⁸, R⁹, R¹¹, R¹², R¹³, R¹⁴, R¹⁵, R¹⁶ ~~are the same or different is,~~

independently, an alkyl or acyl group[[s]] containing 1-24 carbon atoms, which may contain 1-4 ONO₂ substituents; ~~or a~~ C₁ - C₆ connection[[s]] to R¹ - R⁴ in a cyclic derivative[[s]], which may contain 1-4 ONO₂ substituents; ~~or are each independently a~~ hydrogen, a nitrate group, or A;

M is H, Na⁺, K⁺, NH₄⁺, or N⁺H_kR¹¹_(4-k) where k is 0-3; or other pharmaceutically

acceptable counterion;

and with the proviso that when $m = n = p = 1$ and R^{19} , R^2 , R^{18} , $R^1 = H$ and R^{17} , R^3 are nitrate groups, R^4 is not H.

14. (Currently amended) The method of claim 11, wherein F^2 is a nitrate group; ~~and E, F^1 , G^1 , G^2 are the same or different organic radicals which may be joined in cyclic ring systems, and which may contain inorganic counterions;~~ with the proviso that when E and G^1 are methylene groups and F^1 is H, G^2 is not a nitrate group, ~~nor R^N-Z^N ;~~ wherein

R^N is any aryl or heteroaryl group and Z^N is $(CO)_{mm}-X_{nn}^N-Y_{oo}^N$; wherein

mm, nn, oo are 0 or 1 and X^N, Y^N are NH, NR^{NN} , O or CH_2 ; wherein

R^{NN} is a $C_1 - C_{12}$ alkyl group.

15. (Currently amended) The method of claim 11, wherein G^1 is a methylene group F^2 is a nitrate group; ~~E and G^1 are methylene groups; F^1 is H; and G^2 is R^N-Z^N ;~~ wherein

~~R^N is an organic radical possessing an heteroaryl group containing P or S atoms where said P or S are positioned β , γ , or δ to a nitrate group as identified in formula Ia; and Z^N is $W_{mm}^N-X_{nn}^N-Y_{oo}^N$;~~ wherein

~~mm, nn, oo are 0 or 1 and W^N, X^N, Y^N are NH, NR^{NN} , CO, O or CH_2 ; wherein R^{NN} is a $C_1 - C_{12}$ alkyl group.~~

16. (Original) The method of claim 13, wherein R^{19} is X-Y.

17. (Currently amended) The method of claim 16, wherein:

R^1 and R^3 are the same or different and selected from H and C_1-C_4 , alkyl chains, which chains may include one O linking R^1 and R^3 to form pentosyl, hexosyl, cyclopentyl, or cyclohexyl rings, which rings may optionally bear hydroxyl substituents;

R^2 and R^4 are the same or different and selected from H, a nitrate group, a C_1-C_4

alkyl chain[[s]], optionally bearing 1-3 nitrate groups, and an acyl group[[s]] (-C(O)R⁵);
R⁷[[,]] and R¹¹ are the same or different C₁ - C₈ alkyl or C₁ - C₈ acyl;
~~each of R⁵, R⁶, R⁸, R⁹, R¹², R¹³, R¹⁴, R¹⁵, R¹⁶ are the same or different and are is,~~
independently, an alkyl group[[s]] containing 1-12 carbon atoms, which may contain 1-4
ONO₂ substituents; or a C₁ or C₂ connection[[s]] to R¹ - R³ in a cyclic derivative[[s]]; and
M is H, Na⁺, K⁺, NH₄⁺ or N⁺H_kR¹¹_(4-k), where k is 0-3.

18. (Original) The method of claim 17, wherein m = 1, n = 0, p=1.

19. (Previously presented) The method of claim 18, wherein:

X is CH₂, O, NH, NMe, CN, NHOH, N₂H₃, N₂H₂R¹³, N₂HR¹³R¹⁴, N₃, S, SCN,
SCN₂H₂(R¹⁵)₂, SCN₂H₃(R¹⁵), SC(O)N(R¹⁵)₂, SC(O)NHR¹⁵, SO₃M, SH, SR⁷, SO₂M,
S(O)R⁸, S(O)₂R⁹, S(O)OR⁸, S(O)₂OR⁹, PO₃HM, PO₃M₂, P(O)(OR¹⁵)(OR¹⁶),
P(O)(OR¹⁶)(OM), P(O)(R¹⁵)(OR⁸), P(O)(OM)R¹⁵, CO₂M, CO₂H, CO₂R¹¹, C(O),
C(O)R¹², C(O)(OR¹³), PO₂M, P(O)(OR¹⁴), P(O)(R¹³), SO, SO₂, C(O)(SR¹³), or SSR⁵; and
Y is CN, N₂H₂R¹³, N₂HR¹³R¹⁴, N₃, SCN, SCN₂H₂(R¹⁵)₂, SC(O)N(R¹⁵)₂,
SC(O)NHR¹⁵, SO₃M, SR⁴, SO₂M, PO₃HM, PO₃M₂, P(O)(OR¹⁵)(OR¹⁶), P(O)(OR¹⁶)(OM),
P(O)(R¹⁵)(OR⁸), P(O)(OM)R¹⁵, CO₂M, CO₂H, CO₂R¹¹, C(O)R¹², C(O)(SR¹³), SR⁵, or
SSR⁵, or does not exist.

20. (Currently amended) The method of claim 18, wherein:

~~each of R⁵, R⁶, R⁸, R⁹, R¹², R¹³, R¹⁴, R¹⁵, R¹⁶ are the same or different and are is,~~
independently, an alkyl group[[s]] containing 1-12 carbon atoms, which may contain 1-4
ONO₂ substituents; or a C₁ or C₂ connection[[s]] to R¹ - R³ in a cyclic derivative[[s]]
X is CH₂, O, NH, NMe, S, SO₃M, SH, SR⁷, SO₂M, S(O)R⁸, S(O)₂R⁹, S(O)OR⁸,
S(O)₂OR⁹, PO₃M₂, P(O)(OR¹⁵)(OR¹⁶), P(O)(OR¹⁶)(OM), P(O)(R¹⁵)(OR⁸), PO₃HM or
P(O)(OM)R¹⁵; and

Y is SO_2M , SO_3M , PO_3HM , PO_3M_2 , $\text{P}(\text{O})(\text{OR}^{15})(\text{OR}^{16})$, $\text{P}(\text{O})(\text{OR}^{16})(\text{OM})$, SR^5 , $[[\text{SR}^7]]$ SSR⁷ or SSR^5 , or does not exist.

21. (Cancelled)

22. (Original) The method of claim 13, with the proviso that when $m = n = p = 1$ and R^{19} , R^2 , R^{18} , $\text{R}^1 = \text{H}$ and R^{17} , R^3 are nitrate groups, R^4 is not $\text{C}_1 - \text{C}_3$ alkyl.

23. (Cancelled)

24. (Currently amended) The method of any one of claims 11, 13, 14 or 15, further comprising administering ~~the~~ said therapeutic compound with a pharmaceutically acceptable vehicle.

25. (Cancelled)

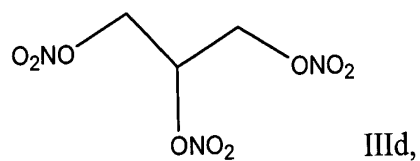
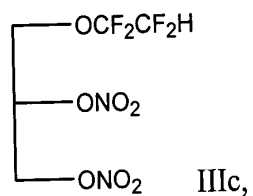
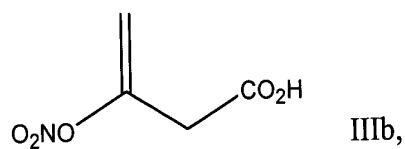
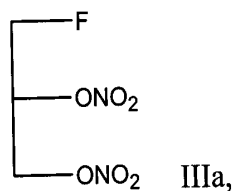
26. (Currently amended) The method of any one of claims 11, 13, 14, or 15, wherein ~~the~~ said therapeutic compound modulates levels of the cyclic nucleotides cGMP and/or cAMP in said subject.

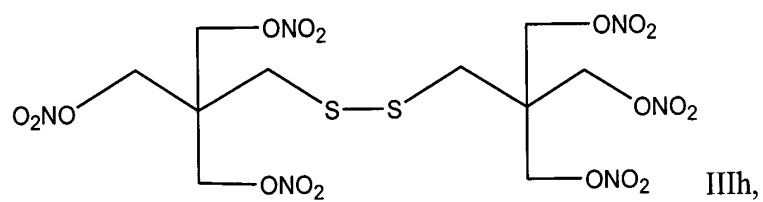
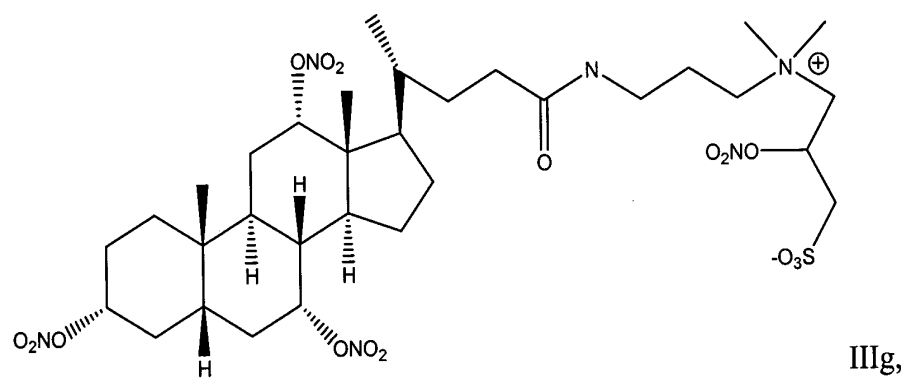
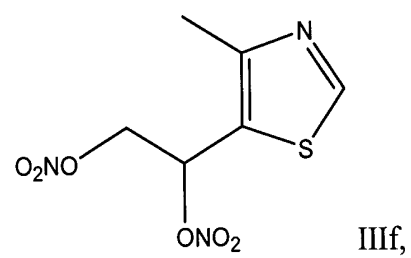
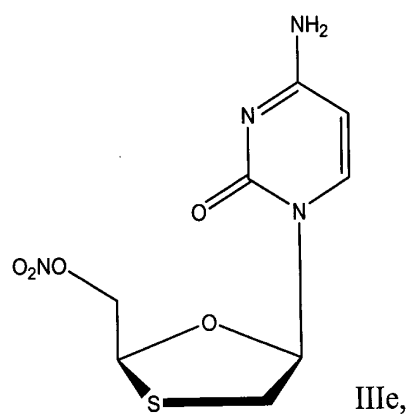
27. (Cancelled)

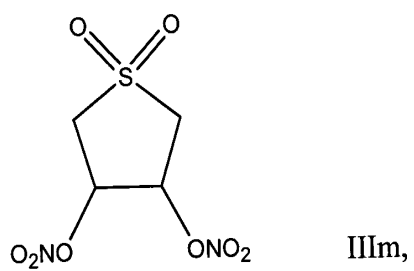
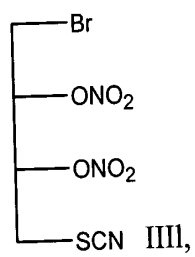
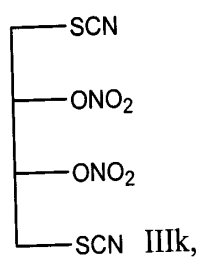
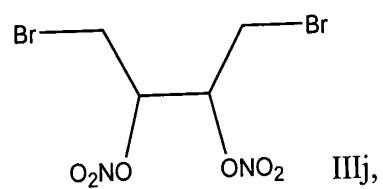
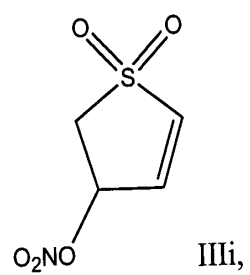
28. (Currently amended) The method of any one of claims 11, 13, 14, or 15, wherein ~~the~~ said therapeutic compound modulates guanylyl cyclase activity in said subject.

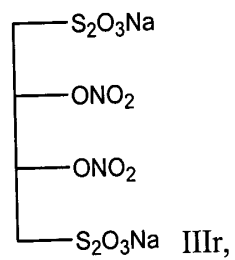
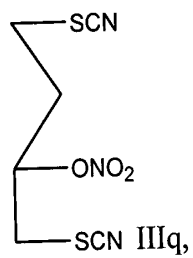
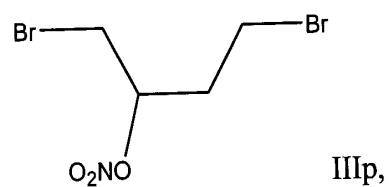
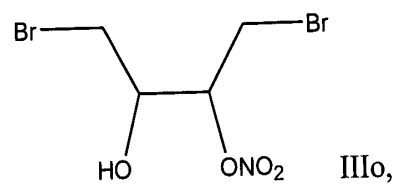
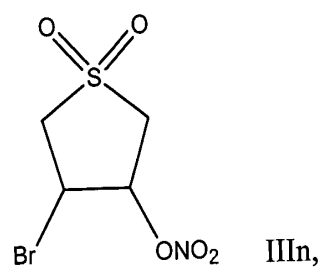
Claims 29-32 (Cancelled)

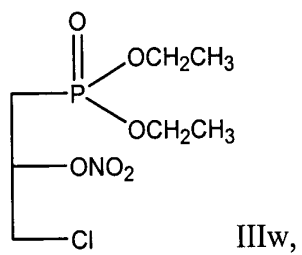
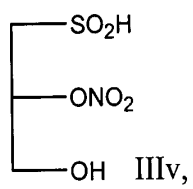
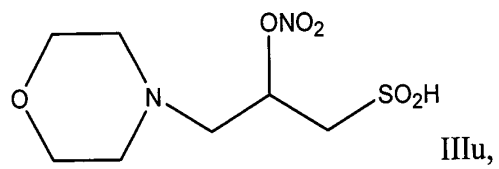
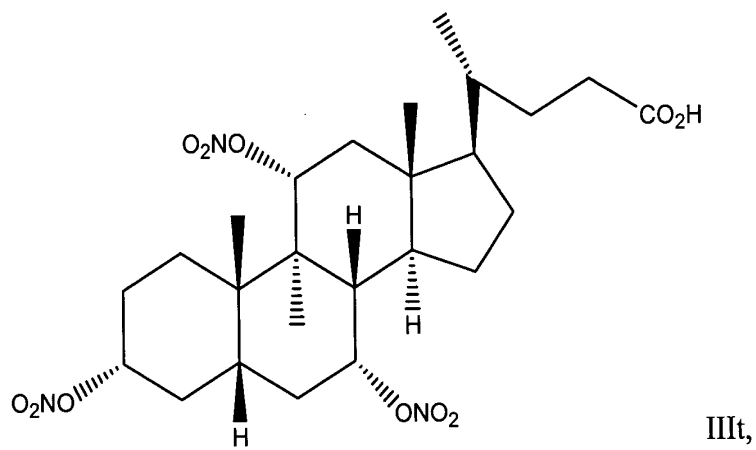
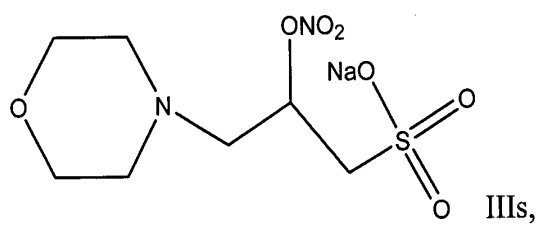
33. (Currently amended) A method of providing sedation or mitigating anxiety in a subject in need thereof, comprising administering to [[a]] said subject an effective amount of a therapeutic compound selected from the group consisting of:

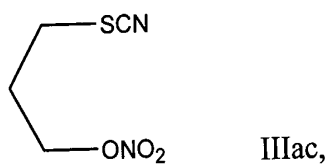
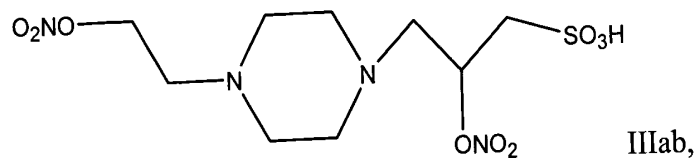
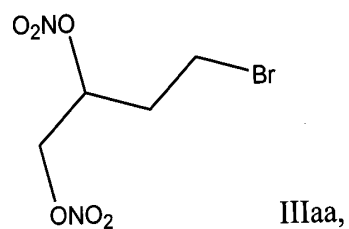
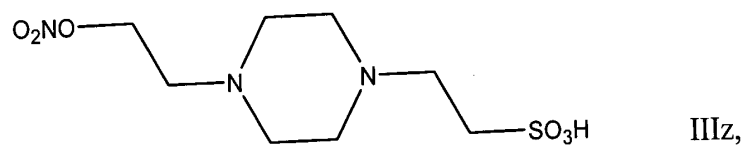
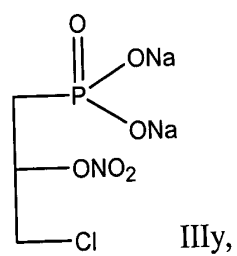
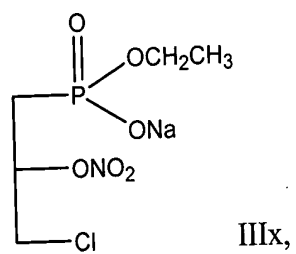


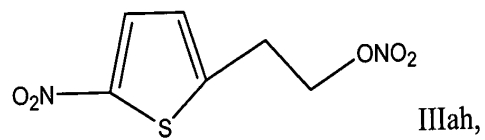
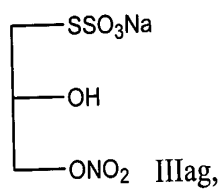
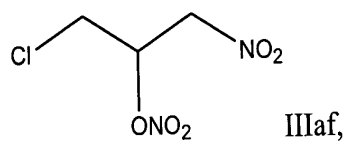
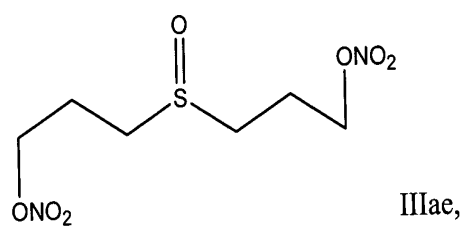
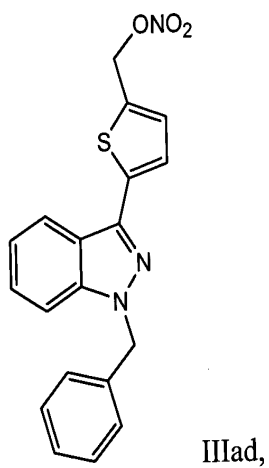


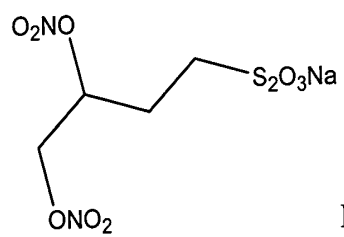




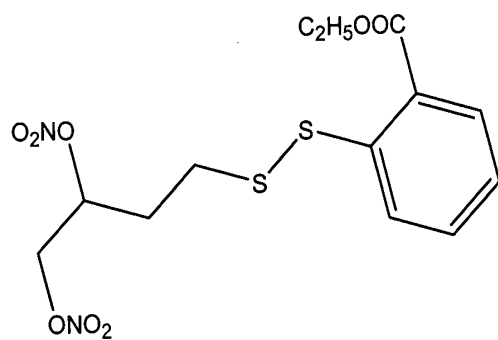




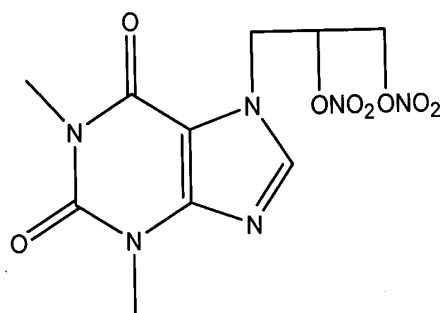




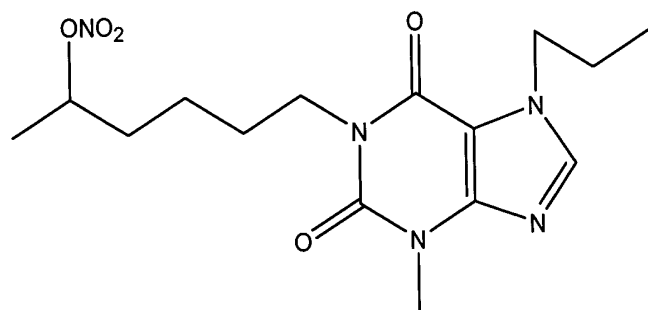
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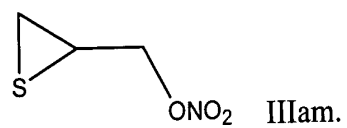
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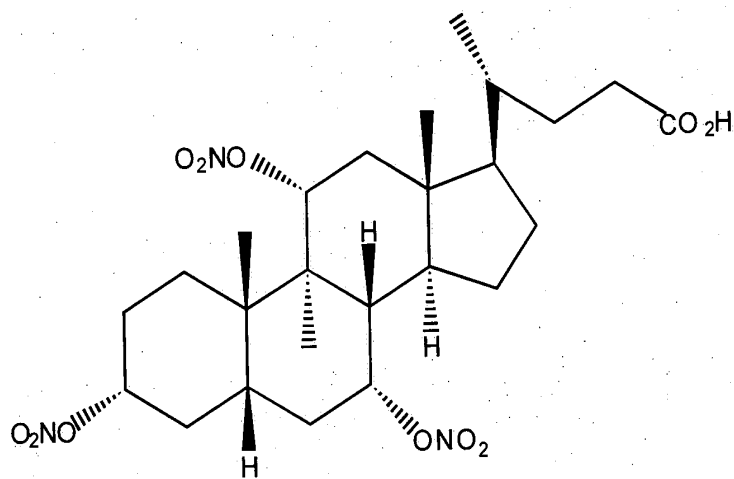
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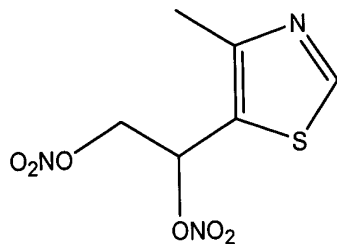
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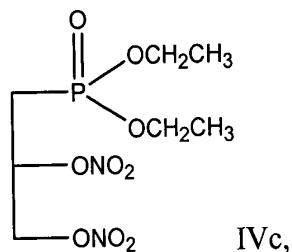
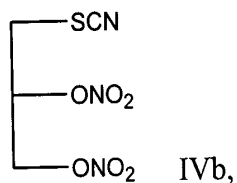
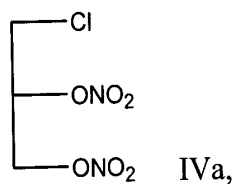
34. (Currently amended) The method of claim 33, wherein ~~the~~ said compound has the formula IIIIt:

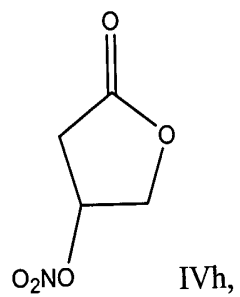
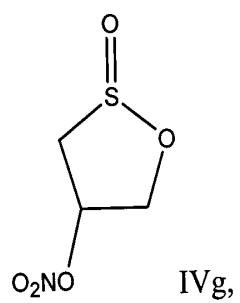
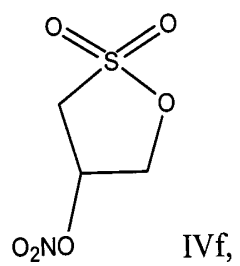
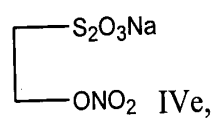
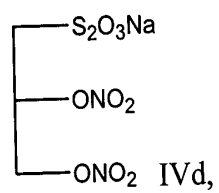


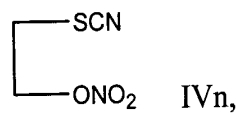
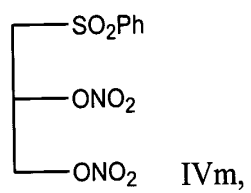
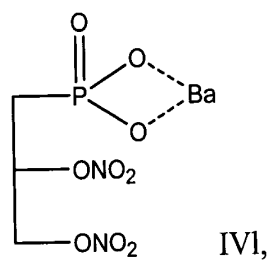
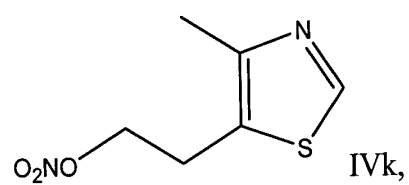
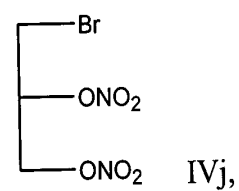
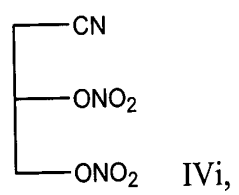
35. (Currently amended) The method of claim 33, wherein ~~the~~ said compound has the formula IIIf:

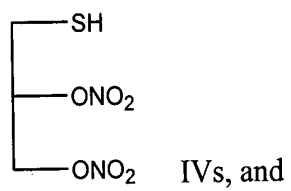
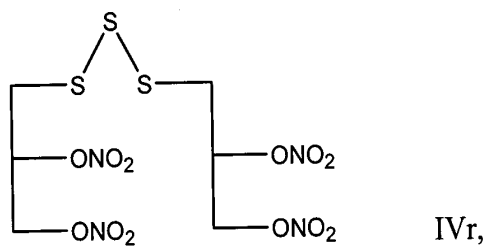
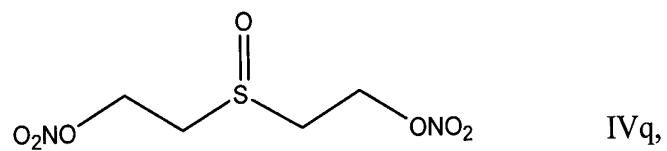
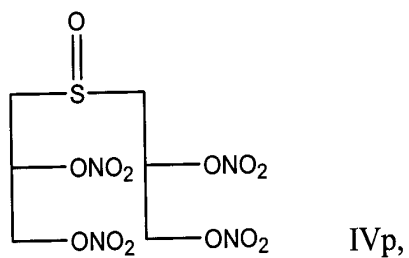
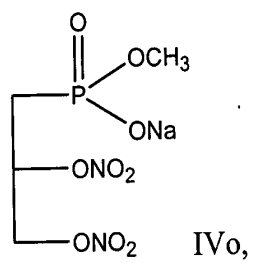


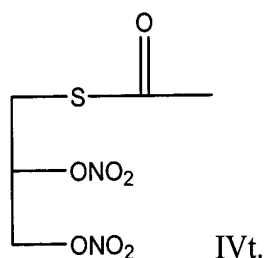
36. (Currently amended) A method of providing sedation or mitigating anxiety in a subject in need thereof, comprising administering to [[a]] said subject an effective amount of a therapeutic compound selected from the group consisting of:



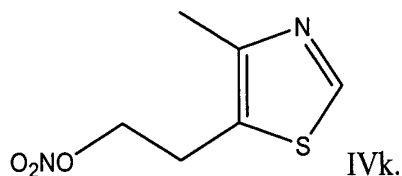




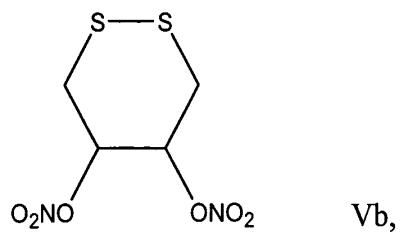
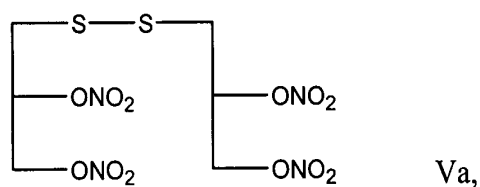


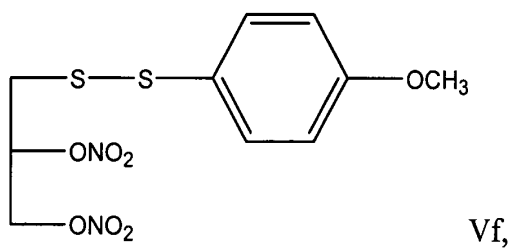
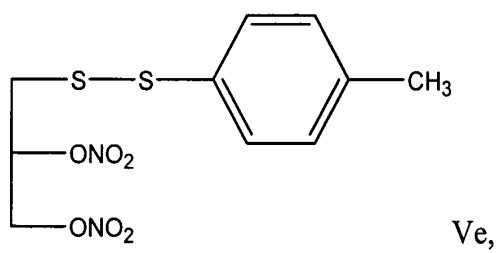
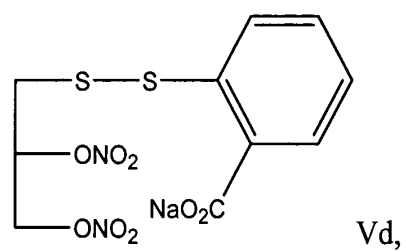
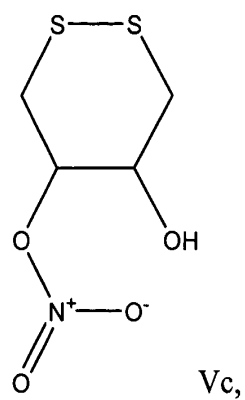


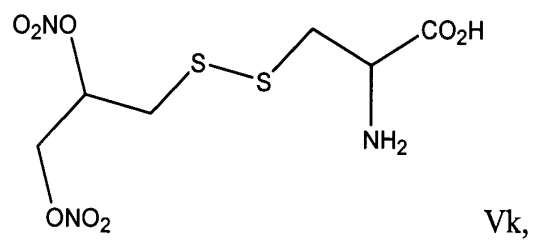
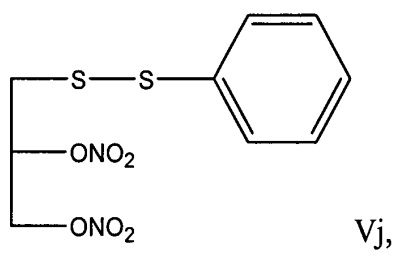
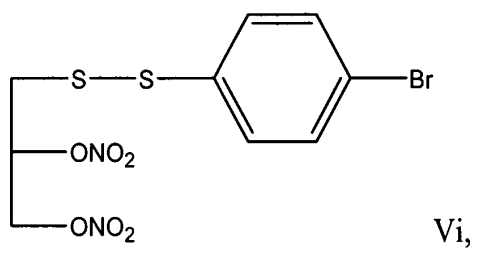
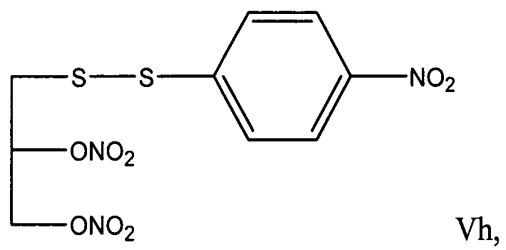
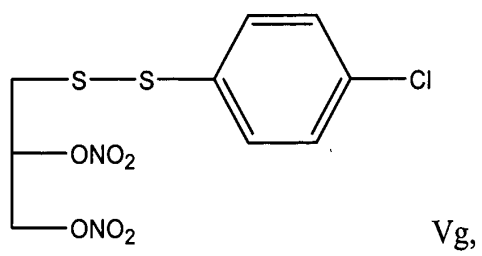
37. (Currently amended) A method of providing sedation in a subject in need thereof, comprising administering to [[a]] said subject an effective amount of a therapeutic compound having the formula IVk:

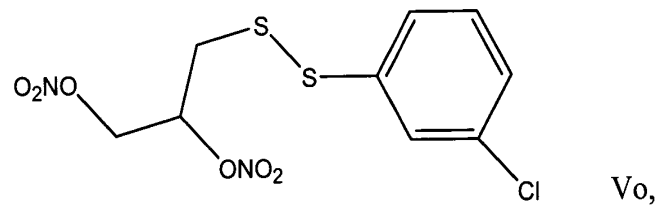
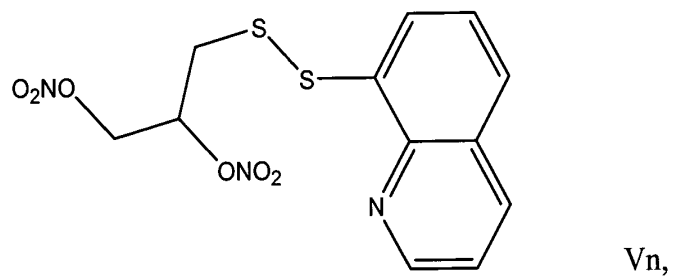
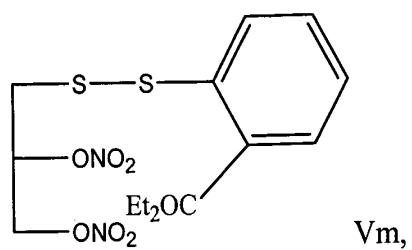
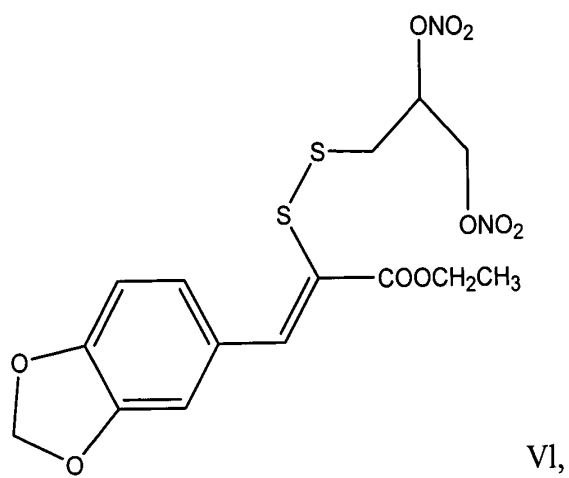


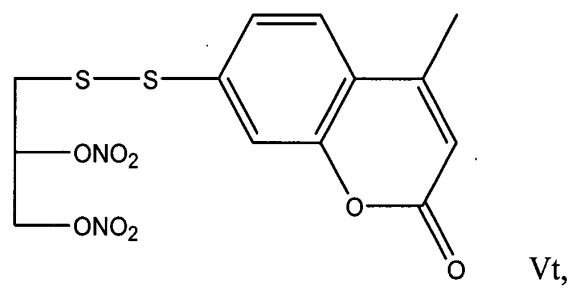
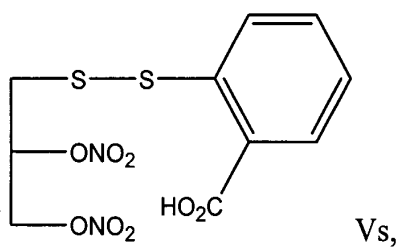
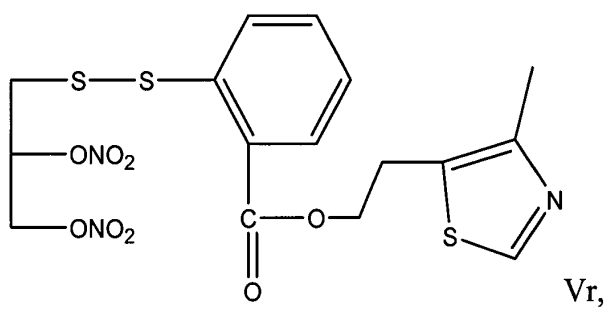
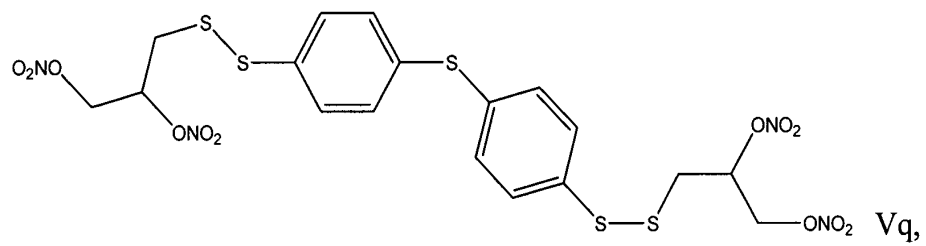
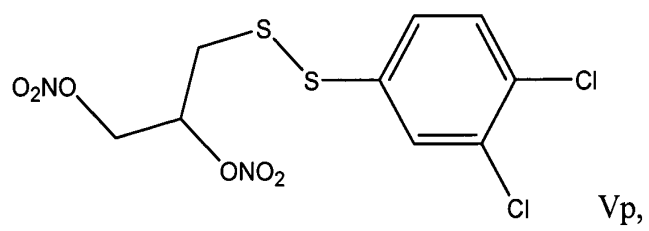
38. (Currently amended) A method of mitigating anxiety in a subject in need thereof, comprising administering to [[a]] said subject an effective amount of a therapeutic compound selected from the group consisting of:

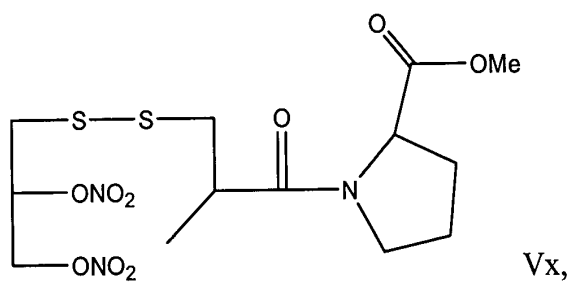
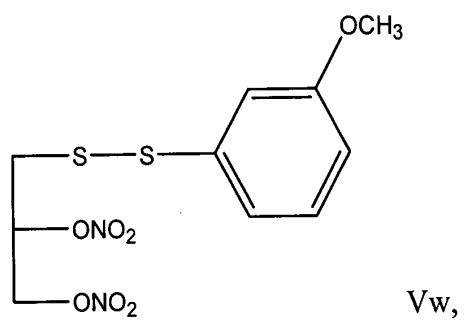
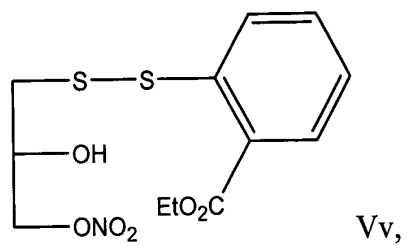
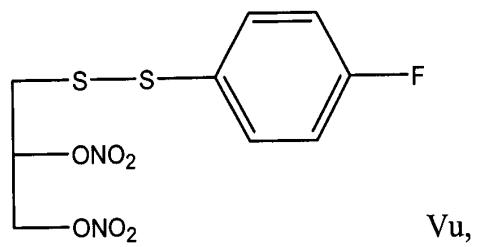


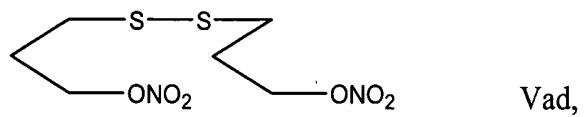
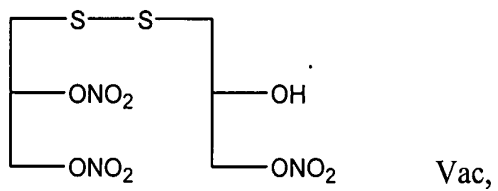
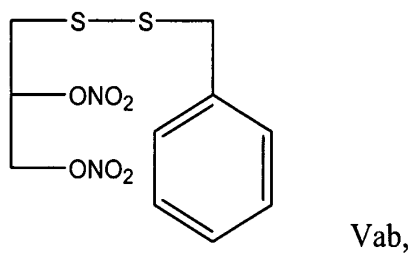
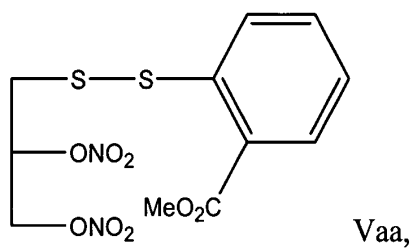
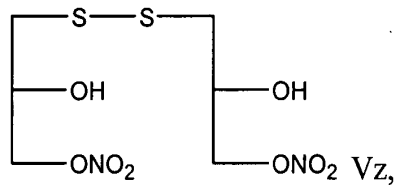
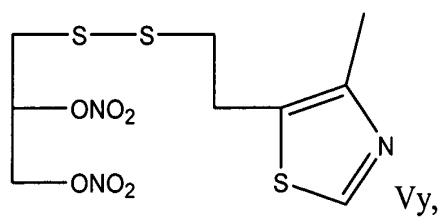


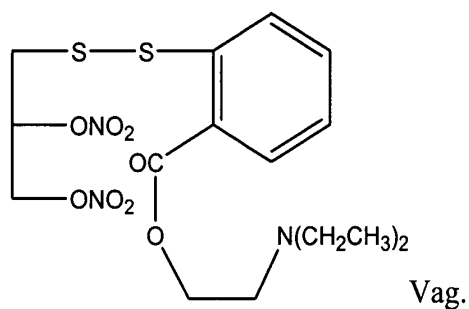
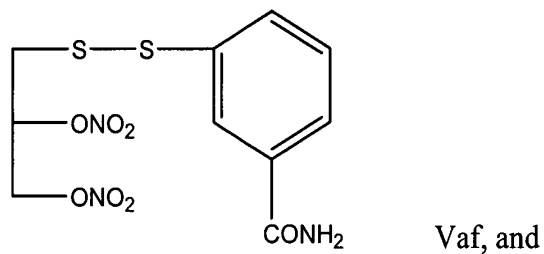
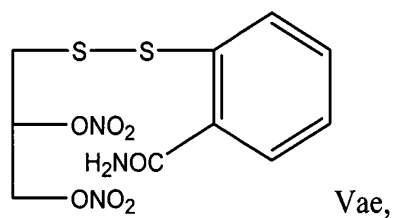




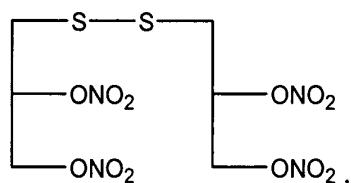




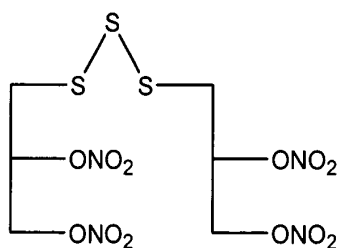




39. (Currently amended) The method of claim 38, wherein the said compound has the formula Va:



40. (Currently amended) A method of mitigating anxiety in a subject in need thereof, comprising administering to [[a]] said subject an effective amount of a therapeutic compound having the formula IVr:



41. (Currently amended) The method of claim [[13]] 11, wherein ~~when E and G⁺ are independently methylene groups or do not exist and F1 is H,~~

G² is not R^N-Z^N; wherein

R^N is any aryl or heteroaryl group and Z^N is (CO)_{mm}-X^N_{nn}-Y^N_{oo}; wherein

mm, nn, oo are 0 or 1 and X^N, Y^N are NH, NR^{NN}, O or CH₂; wherein

R^{NN} is a C₁ - C₁₂ alkyl group.

42. (Cancelled)

43. (New) The method of claim 16, wherein X and/or Y contains a sulfur-containing functional group.